

## **REMARKS**

Claims 1-24 are pending in the application. Claims 1, 3, 5-10, 13 and 14 have been amended. Claims 2 and 4 have been canceled. Claims 15-24 are new. No new matter has been added to the application.

### **§103 Rejections**

Claims 1-7, 10-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 5,355,638 to Hoffman in view of U.S. Pat. No. 3,371,449 to Olsen. (It is noted that the Office Action indicates the claim 7 was also allowable. It is assumed that the Examiner meant to indicate that claim 9 was allowable since there is no other action on claim 9.)

The '638 patent is owned by the assignee of the present application. The '638 patent relates to a rotational processing machine which uses a plurality of inner vessels contact and roll along the inner circumference of an outer vessel. The combined rotation about the inner vessel axis and the outer vessel axis provides improved abrasive flow within the inner vessel.

The '638 patent mentions that a zirconia ball can be polished in a two-stage polishing operation. The first stage involves polishing the ball for 1.5 hours using a 30 micron diamond abrasive media. The second stage involves polishing the ball for 1 hour at 325 rpm using 9 micron abrasive media.

There is no discussion of using a fixture inside the inner vessel.

The '449 patent discloses a vibratory finishing machine which includes a single tub within which a fixtured array of products are rotated about a center shaft. The tub is vibrated to provide the polishing. The products (golf club heads in the illustrated embodiment) are mounted so as to be spaced apart from one another.

Claim 1 recites, among other things, that the inner vessel is rotated in the second stages at an initial second stage speed for an initial period of time, and then reducing the inner vessel speed to a second stage speed and substantially holding the speed of the vessel at that second speed for a second period of time of at least several minutes.

The '638 patent discloses the rotation of the inner vessel at two speeds, a first speed and a second speed. The Examiner correctly notes that as the vessel is turned off, it will pass through another speed. However, there is no disclosure or suggestion in the '638 patent to hold the speed of the inner vessel at a first speed during a first stage, an initial speed during a

second stage, and then a reduced speed during the second stage where the vessel is held at that second speed for a period of time which extends for at least a few minutes. The '449 patent does not remedy this deficiency in the rejection. There is nothing in the '449 patent regarding operating the inner vessel as described above.

Accordingly, the combination of the '638 patent and the '449 patent does not render the invention in claim 1 unpatentable.

Furthermore, there is no suggestion in any of the prior art of record to rotate the vessel at least at three speeds and for three time periods. The selection of these process steps was determined after extensive testing, and is not a "mere" matter of design choice. These steps are inventive and not suggested by the prior art.

For all the foregoing, claim 1 is allowable over the art of record. Reconsideration and withdrawal of the §103 rejection is respectfully requested.

Claims 2 and 4 have been canceled.

Claims 3, 5-7 also ultimately depend from claim 1 and are, therefore, allowable. Furthermore, claim 6 recites that the initial second stage speed is approximately the same speed as the first stage speed and then is reduced to a speed that is less than the first stage speed. Neither the '638 nor the '449 patents disclose this feature. Claim 7 recites

Claim 10 recites, among other things, the steps of rotating the inner vessel the vessel in a second stage at an initial speed relative to the outer vessel, then slowing the rotation of the inner vessel in the second stage to a second speed and rotating the inner vessel at approximately that speed for a second period of time, where the second period of time is for at least several minutes.

As discussed with respect to claim 1, the process of rotating an inner vessel at three speeds and for three time periods is not shown or suggested by the '638 patent or the '449 patent. The '638 patent discloses the rotation of the inner vessel at two speeds, a first speed and a second speed. The '449 patent does not provide any suggestion to vary process speeds. The Examiner's suggestion that the vessel will pass through a third speed as it slows down fails to account for the common understanding of the phrase "time period" which does not mean a "point in time" as the Examiner's position would require it to mean. A time period is a duration of time. To clarify this, claim 10 has been amended to recite that the period lasts at least several minutes.

Since these process steps are not shown or suggested in the prior art, claim 10 is allowable. Reconsideration and withdrawal of the §103 rejection is respectfully requested. Claims 11 and 12 depend from claim 10 and, therefore, are also allowable.

Based on the foregoing, Applicant respectfully submits that all the claims are patentable over the prior art. Allowance of those claims is solicited.

#### **Allowable claims**

Claims 7, 8, 13 and 14 were indicated as being allowable. As noted above, it is believed that the Examiner meant to identify claim 9 as allowable, and not claim 7 (since there was no rejection of claim 9 in the Office Action and claim 7 was separately rejected under §103.) Claims 8, 9, 13 and 14 have been rewritten in independent form and include all the limitation of the claims from which they previously depended. These claims are all in condition for allowance.

#### **New Claims**

Claims 15-24 are new and all ultimately depend from existing claims. Thus, these claims are allowable. Furthermore, claims 15 and 19 depend from claims 10 and 1, respectively, and recite that the first abrasive includes silicon carbide and the second abrasive includes aluminum oxide. Neither the '638 nor the '449 patents recite these different abrasives. The '638 patent recites only a single type of abrasive (with differing grit counts.) Clearly these claim features are not disclosed nor suggested by the prior art. Claims 16-18 and 20-22 recite specific processing time periods for the first and second stages. These process steps are not disclosed nor suggested in the prior art of record. Claims 23 and 24 recite additional intermediate process steps of removing the tools from the inner vessel, sharpening at least a portion of the tools, and then placing the tools back into the inner vessel to conduct the second stage processing. There is no suggestion in the '638 or the '449 patents to do these additional intermediate steps.

Based on the foregoing, it is respectfully submitted that new claims 15-24 are allowable over the prior art.

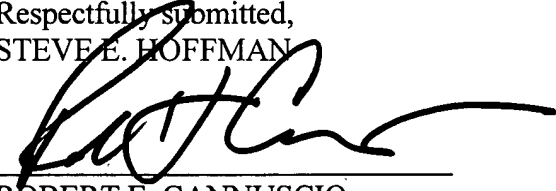
**Change in Attorney Docket No.**

The Attorney Docket No. has changed in this case to 9436-30CI2 (184253). The undersigned requests that the Patent Office records be updated to incorporate this change.

If the Examiner believes that direct communication with the Applicant's attorney would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,  
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